

Milestone IP video platform makes security easier at MAXI ICA

Over 100 IQeye megapixel cameras watch over one of Sweden's largest supermarket chains

“Word got around quickly that we had installed a tough new system. According to the guards, the usual mischief disappeared at once,” says Joakim Lindgren, partner in MAXI ICA Superstore Umeå.

MAXI ICA Superstore in the Swedish city of Umeå has invested in a security system with 147 megapixel cameras from IQinVision. The servers handle a total of about 2,200 images per second and Milestone XProtect™ Enterprise software makes it easy for staff to manage all the cameras.

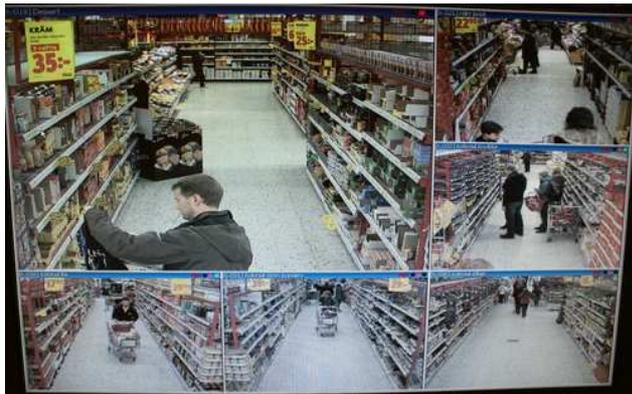


Of late, robberies of businesses have increased. In the autumn of 2009 there were on average three store robberies every day. MAXI ICA Umeå has thus far been spared major incidents.

“But it’s a question of preventing robberies. Otherwise, personnel risk both threats with weapons and actual assaults. The main reason for camera monitoring is so that personnel can feel safe,” stresses Mr. Lindgren, who explains the problem with drug and alcohol-influenced people who sometimes come into the store and become aggressive. “Verbal death threats were directed at personnel, which is terribly disturbing, of course. But since the new security system has been installed, nothing more of the kind has taken place. Word has spread that we have a large, effective system. Personnel feel that they are safer now.”

Swindlers and shoplifters revealed

The guards noticed early on that known criminals disappeared as soon as the new monitoring system came into operation. But there are people who just don’t care if they are recorded and others who know to take advantage of the fact that the threshold for theft starts at 1,000 kronor - not least youngsters.



“The guards discover shoplifting with every inspection, in general. Of course, this is a big problem, but it should be seen in the perspective of our 40,000 customers per week,” comments Lindgren.

Attempted fraud in the store is hard to follow up on if it’s not recorded. For example, customers who claim they have received change for a hundred kronor note instead of a five hundred, or who try to cheat at the betting counter.

“The personnel had discovered that some betting stubs were missing. We looked in the system and saw someone reaching behind the counter and taking them. It was reported to the police afterwards,” explains Lindgren. “The surveillance system makes it possible for us to prove what has happened, or the opposite. If there has just been a mistake, it can be cleared up, as well.”



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Technically-minded shopkeepers

A security concept has been developed by ICA's central security unit, which sets minimum security levels for the stores. For example, the checkout lines, entries and exits were camera monitored, and an analogue system had been installed when MAXI ICA Superstore Umeå opened in 1998. But that fell far short of present-day needs.

"I have always been interested in technology, and we couldn't really expand on the analogue system, so it was natural to take the next step. The future lies in megapixel systems with IP software. This is where developments are taking place with astonishing speed," observes Lindgren.

Tough requirements

Mr. Lindgren thought of handling the procurement himself, but realized that it was too difficult to write the specifications.

"I got help from consultant Ingvar Hedvall from Elkon. He also thought it was difficult: we started from SKL's table when we drew up the plans and it led to a very deep file of spec requirements. Afterwards, we realized how very hard it was," he admits.

The permit application was sent to the Västerbotten County Administration as recommended in spring of 2008.



"The county administration here is in favor of monitoring systems used in the right way. They understand it is a big help and they see the synergy with the police," says Lindgren.

System integrators InSupport Nätverksvideo won the contract and got the order just before midsummer 2008. The system was fully operational in December 2008. Fine-tuning was done in spring of 2009 and clearance monitoring followed. A total of 115 IQinvision IQ-711 1.3 megapixel cameras were installed. Together with the analogue cameras, this means 147 cameras are now monitoring the store.

Unlimited possibilities

"Each camera takes 15 pictures per second; altogether we have about 2,200 pictures per second, which requires an enormous storage capacity of 70 TB (terabytes). The ongoing network load is about 4.3 GB/second. Six servers and a master are required for this," he reports.

Because Lindgren wants to be able to get at the pictures quickly when a case arises, the software must also be of the highest quality.

"InSupport is a certified Milestone Partner. Now we install Milestone software almost exclusively, because their interface is completely open. Open software is a cornerstone, since the customer must not be hamstrung," explains InSupport Managing Director Fredrik Westin. "The ICA group has a basic license for Milestone XProtect Enterprise but since the system in Umeå is so large, MAXI ICA has its own Milestone license."

Westin continues: "It's no problem to put a twenty-camera system together, but with such a large performance system as this, everything comes to a head - it has to be high-quality. XProtect Enterprise has no limitations as far as how many cameras or servers can be connected. Thus, it's possible to do almost anything. We can also monitor the whole system from our office in Stockholm."



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Easier for guards and police

There are four client computers in the store with one of them in the watch room, where there is also a camera installed in case a guard is assaulted. Milestone XProtect Enterprise allows access to video from all the cameras everywhere at anytime. Not least, the menus being in Swedish makes it quite easy to use the software.

Private guards hired from Securitas are always on duty. They can “be made” if they show themselves too often out among the customers. Previously, it was also hard for the guards to prove that someone had taken merchandise.

“The new surveillance system makes our job easier! I hope that more clients will get such systems - it is easy to use and we can monitor everything that happens in the store. We work in pairs and communicate with each other using cell phones,” says one of the guards, who wishes to remain anonymous.

MAXI ICA Superstore Umeå has a policy of reporting all infractions taking place on the premises to the police, including shoplifting by youngsters. Permission to save recorded material for 30 days is a precondition for the police to have time for every infraction.

“There is never any doubt when the guards call - the police always come here. They are grateful that they can easily order images and get them on a DVD or USB stick. It’s great when the police say that the image quality is so good that they can easily see what’s happening and identify the perpetrators,” says Lindgren. “It is also positive since it sends a clear message when a police car is parked outside the store that reports are taken seriously.”

Low placement challenging

Perpetrators usually look down when they are in a store, nonetheless it is all too common that cameras are placed so high on the ceiling and that they can’t identify people. Joakim Lindgren had taken note of this and wanted to place the cameras low on certain racks where make-up and media products are kept, for example. Before finally making up his mind, he wanted to know how the customers felt about the low placement.

“We experimented a lot at the start, went around with a lift, moving all the lights and signs that were on the walls,” he says.

“It was a big challenge to build the system. We rented a house at Umeå Camping and several of our technicians lived there for two months. It is great to have customers who know what they want and are familiar with what is good quality,” stresses Fredrik Westin.

High efficiency is economical

Joakim Lindgren thinks it is good to have cutting-edge technology in his store, even though the reason for the installation is unfortunate.

“It might sound a bit much with 147 megapixel cameras, but seen in the context of about 11,400 square meters of floor space, there are fewer cameras per square meter than in a Kvantum store, for example,” he notes.



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“The reason MAXI ICA didn’t choose to have even more cameras per square meter is explained by our choice of megapixel cameras, which can cover a greater area than cameras with conventional resolution. It is quite simply a more efficient solution, thus more economical than installing conventional cameras. Although the unit price is higher for megapixel cameras, we don’t need as many,” confirms Westin.

Custom-tailored system

Configuring cameras is the core of InSupport’s business concept, as well as customizing all the system components.

“We often implement between 20 and 30 things in each camera, such as controlling exposure in different ways,” explains Fredrik Westin. “Several cameras have wide-angle lenses. The lens is the key to really good image quality. A good lens costs between 1,200 and 3,000 kronor, but a lot of people cheat here and use 300 kronor lenses, which is like putting a Lada motor into a Rolls Royce.”



Further development

Joakim Lindgren will continue to develop the surveillance system into the future: “Perhaps there are too many cameras on certain stands, so they might be moved. The remaining analogue cameras will probably be replaced. I’m also interested in smart cameras that can measure customer flow, for example.”

About MAXI ICA Superstore Umeå

MAXI stores are ICA’s top retail outlets; aside from a wide selection of food products, they sell clothing, footwear, fabric, media products and household utensils. As of November 2009, there were 69 MAXI stores in Sweden, with three new openings scheduled for 2010. MAXI ICA Superstore Umeå opened in 1998 and is now one of Sweden’s 15 largest supermarkets, with about 50 000 items. The store is owned by the Lindgren family, and has 160 employees. www.icamaxiumea.se

About InSupport Nätverkvideo

InSupport Nätverkvideo, operating since 2004, was the first company in Sweden to concentrate exclusively on all-digital platforms. They install and deploy surveillance systems and custom design systems according to customer wishes, with various levels of advanced solutions. Their customers are mainly retail stores, security firms, industry and public agencies. InSupport has 7 professionals and 15 other employees, all with many years of experience in the IT and security sectors. www.insupport.se

www.iqinvision.com; www.milestonesys.com



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